

GLOCAM Event Driving Recorder



User's Manual

Ver. 1.9

GC1 as shown.

Before using this product, please read the User's Manual for the correct installation and use.

This product does not guarantee the absence of auto accidents directly or indirectly. Glonex, Inc. assumes no responsibility for any loss or claims by third parties which may arise from the use of this product.

Please note that some events may not be marked as event according to the type of impact.

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Safety Notice

This notice is to prevent danger from electrical shock, fire, explosion, etc.

- When consumer uses this device incorrectly or for any other use than it is intended.

Read the content below completely.

The contents of this User's Manual are subject to change without notice.

For the latest version of the User's Guide, please refer to www.glonex.net



Warning



Do not disassemble the camera. This will void the warranty and possibly cause failure, electric shock or fire. Please contact Glonex, Inc. for repair issues.



Do not operate while driving.



Make sure to place it where it will not block the driver's line of vision when installing the camera.



Do not move or adjust the camera while driving.



You should have the camera installed by a professional if using the Harness Power Cable for direct power from the battery.



When installing the camera, be careful not to cut or damage the power cord.



Caution

1. Do not pull out the micro SD™ Card when the camera has the power supply attached. This may damage the card.
2. Do not use the micro SD™ Card in any other device other than a smartphone.
3. Make sure that your hands are clean and dry before handling the SD™ Card; do not touch the metal end. Water and dirt can cause contamination of the card, which may damage it.
4. Do not insert any other objects other than the micro SD™ Card into the card slot. This may damage the card slot.
5. Make sure that the adapter is plugged in securely to the 12-V supply. Secure contact is necessary for data recording.
6. Wipe the camera with a soft, dry cloth when cleaning. Do not use water or chemicals to clean.
7. Avoid dropping the camera and otherwise subjecting it to severe impact. This may damage the camera.
8. Using a defective memory card may cause data loss; it is recommended that you use a Micro SD™ Card only.
9. Camera requires a few seconds to activate; unit will beep when recording has started.
10. Some vehicles have a metal coating on the windshield. Installing on this can cause a weak GPS Signal and obscure the lens view.
11. The contents of these instructions are subject to change without notice.

Product Features

GC-1 records the front view of the vehicle and records audio inside the vehicle. GC-2 has the same features as GC-1, except it can also record the vehicle's interior. Recordings can be used as evidence in case of accidents, can record parking lot damage and can be a deterrent to theft.

Overview

Hardware

One channel (front view) image / voice store
Exceptional video quality
The front camera records up to 30fps (GC1) and 12fps (GC2), the Rear Camera (GC2) records 6fps.
Micro SD™ Card (2GB - 8GB) available.
4GB/8GB (CLASS 4 or higher) recommended - 4GB card included.
G-Sensor included.
GPS receiver included
Continuous, Event, Manual, and GPS Log Recording, and GPS Log File features included.
Parking Mode supported (10fps)
External Button
Voice Alerts

Software

PC Manager:

- Video playback
- Simultaneous pointing on Google Maps

GPS Tracker:

- Routing information
- Tracks driving route

Part Description



No.	Parts	Description
1	Camera Lens	Front view recording
2	GPS Module	To receive satellite signal for location information
3	Power/Operate LED	Indicates power is on and controls audio On / Off Press & hold for Rear Camera On/Off (GC-2 Model)
4	Manual Recording Button	Press once for Manual Recording On/Off Press and hold for Parking Mode On/Off
5	Speaker	Voice Message
6	IR Sensor	(GC-2 Model)
7	Rear Camera	(GC-2 Model)
8	Micro SD™ Card Slot	SD™ Card to be inserted
9	Power Connection	External Power Connector
10	Cradle	Window Mount for Camera
11	Microphone	Internal Voice Recorder

Components Check List



※ The picture of components may differ from the items included in this package, Some accessories may be modified or discontinued without notice.

Inserting / Removing the SD™ Card



1. Insert SD™ Card into the slot.
2. Replace the cap over the end of the camera to protect the device and card.
3. Connect the power cord into camera - LED will light up.
4. Remove the SD™ Card by pushing to eject it.

Caution: Make sure that the card is pushed in securely. If it is not inserted correctly, it may cause a malfunction.

It is recommended that you use Class 4 or higher memory cards for optimal camera performance.

Caution: Do not let card get wet or dirty. Do not touch metal end of card. These can cause malfunctions of the card / camera.

Do not use the SD™ Card for any other purpose than with the camera. To do so may cause loss of data and/or malfunction.

Operating the Camera

Title	Operation	Function	Voice Message
Power On	Power connection to the device	Recording start	Beeps after "Welcome"
The angle of the front camera	Adjust camera up and down	The front camera angle adjustment	
Event Recording	Shock detection	Event Record Storage	"Event"
Manual Record	Press Manual Record Button	Saves Manual Recording	"Manual Recording"
Select the Internal Voice Recording	Press LED Button (ON/OFF)	Voice recording (Default) ON-flashing red LED OFF-flashing blue LED	"Audio locked" "Audio unlocked"
Rear Camera Control (GC2)	Press and hold LED Button (ON/OFF)	Rear Camera ON / OFF	Rear Camera "On" Rear Camera "Off"
Select the Parking Mode	Press and hold the Manual Recording Button (ON/OFF)	Parking Mode ON/OFF Flashing LED long Recording with 10fps	"Parking mode On" "Parking mode Off"
Power OFF	Disconnect the power cable or turn off engine	Camera will turn off when the reserve power is depleted. (About 5 Min.)	
No insertion of SD card			"Insert SD™ Card"
Card Errors			"Check SD™ Card"
Firmware Update	1. Save the new firmware to root of micro SD™ Card 2. Insert the SD™ Card into the slot. 3. Connect the Power Cord. This will start the update mode and voice message will state "Start Program Updating". 4. LED will flash Red-Blue-Purple during update. 5. When update is complete, voice message will state "Update Completed". The LED will flash purple, and the unit will beep. When this occurs, disconnect the power.		"Start Program Updating" "Update Completed"

Product Description



Recording

After inserting the micro SD™ Card, power up the camera by attaching the power cord and plugging it into a 12-V receptacle (Cigarette Lighter).

LED will flash purple.

Voice message "Welcome" will be heard.

LED will flash red at 1 second intervals.

Unit will beep when camera is ready to record.

When an event is detected by the G-Sensor, the LED light will flash blue and red. If there is a substantial bump, dip, swerve or stop the voice message will state "Event".

Power Off - LED will cease flashing. When LED light is off, it is safe to remove the micro SD™ Card without damaging it or the camera.

Parking Mode - LED will flash every 4 seconds. Recording is being saved on the micro SD™ Card at 10fps.

To save any important recorded data, remove card, copy and save to your computer.



Recording Images

0.3 MB Camera

120° Angle

Event Recording Storage

An extreme motion detected by the G-Sensor will be recorded and stored as an "Event" file.

Manual Recording Storage

Press the "Manual Recording Button" to manually store images you want to record separately; these are stored as a "Manual" file. The LED will flash red and blue when "Manually Recording".



Parking Mode Recording (10fps)

Press and hold the "Manual Recording Button". This reduces the video rate to 10fps which saves SD™ Card storage. Records up to 15 hours with 4GB micro SD™ Card

Constant Recording (when engine is off)

A Harness Power Cord is required to record in "Parking Mode". This cord should be professionally installed and draws power directly from the battery. This will allow continuous 24 hour recording on an 8GB micro SD™ Card and Parking Mode Recording if needed.

Note: SD™ Card will be overwritten if recording for long periods of time. If you



GPS Log Route Tracker

Track driving route through the separate GPS Tracker Viewer. Information is stored in the GPS Log file.



Smart Phone Playback

Recorded images can be displayed through smart phones that can play MP4 (H.264) format.



Parking Mode

The Red LED (Voice Recording “on”) or Blue LED (Voice Recording “off”) is cross flashing at 3 second intervals. This reduces video rate to 10fps, which saves SD™ Card storage.



Voice Recording ON/OFF

When unit is turned on, the Voice Recording is activated. To turn this feature off, press the red Voice Recording Button.



Event information

When an event occurs, the time or G-Sensor value is saved into a separate folder.



Speaker (Voice Alert)

According to the camera operation, voice alerts will be announced through the speaker.



Google Maps Integration

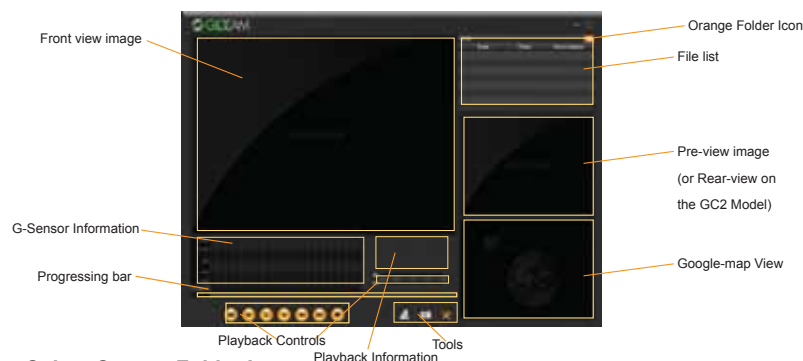
By being equipped with the GPS Google Maps Integration Module, the route taken is recalled by the receiving satellite

Device Status Check

Check LED Flashing Display:

Status	Voice Message	LED Classification		
		Purple	Red	Blue
Power on/recording starts	Recording starts with a beep	flashing		
Video is recording (voice recording ON)	-		flashing	
Video is recording (voice recording OFF)	-			flashing
Error in boot Connect problem of other hardware or sensor data		-		
No card Inserted	Insert SD™ Card	-		
Card inserted incorrectly	Check SD™ Card	flashing		
Event Recording (G-Sensor detection)	Event		<-> red/blue cross flashing	
Manual Recording (the Manual Recording Button)	Manual Recording		<-> red/blue cross flashing	
Parking Mode ON	Parking Mode ON		- Red or blue is cross flashing long	

Software Instructions



Select Orange Folder Icon:

To view the files on your micro SD Card 1) Select orange folder icon, 2) Select the removable disk caption in the "Browse for window" 3) Press "OK". Files will appear in the "File list" 4) Now you can choose what you want to see.

Playback Information:

Displays the selected file information such as: Vehicle Speed, GPS Data (latitude and longitude).

Playback Controls

To view any file in the file list, highlight the file and click play button.

Slide bars allow you to slow down/speed up play and increase/decrease volume.

Enables you to play, stop, fast forward, rewind and pause.

G-Sensor Information (G-Sensor Graph and Value)

To review the acceleration, deceleration and shock information from the G-Sensor: Select file, press play.

Tools:

Allows the user to capture images, print and operate settings. Also allows video swap in the GC2 Model.

Preview:

Allows the user to pre-view the selected video on the file list on the GC1 and displays Rear View on the GC2.

Map View:

Google Map is used to view this information and can only be viewed when the user is connected to the internet. GC Manager automatically connects to Google maps.

**PC Manager Version indicates the current version of the software program.

**The user can download software program of firmware update at www.glonex.net

PC Requirements

CPU: Pentium 1GHz or higher, Memory: 512MB RAM or higher

OS: Win98, ME, XP, Vista, and Windows7, Hard Drive: 500MB or higher



Using the Software

How to playback files:

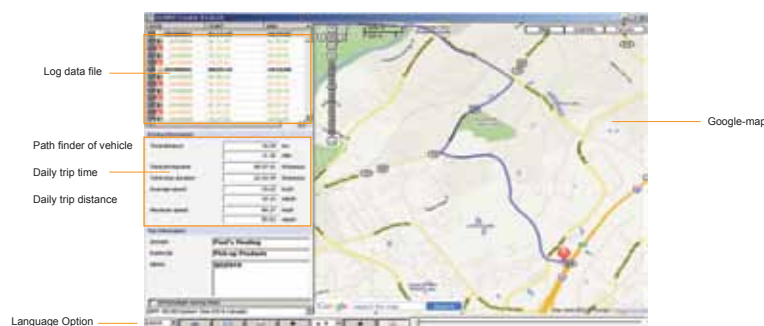
- Place installation CD into computer drive. (Installation program shortcut will automatically install on the desktop)
- Click on the "GC1 Manager" or "GC2 Manager" icon to open program.
- Select the orange folder icon.
- Select "Removable Disk" (Micro SD™ Memory Card)
- Click "OK"
- Recorded files are added to the "File List".
- Select file to view.
- Press "Play" Button.

The recorded files are stored by the date and time, and they are listed automatically such as Event file "Sensor", Manual file "Manual", and Normal file "Continuous".

While a file selected from the file list is being played, the user can move to the previous or next file then:

- Click "Play" Button.

GLOCAM Tracker



Language Selection Button: The program supports for multiple-language selections. Use Language Bar and Up/Down Arrows to select preferred language.

Search for Log File: Click folder button beside language option, then find the Lx-xxxx Log that you want to view in the micro SD™ Card drive.

Save Button: User can enter information such as purpose of the trip, make notes, etc. and then save them to a file for later use.

Print Button: Map or trip information can be printed.

Navigator Button: The user can control the driving playback with buttons, such as Play, Stop, Backward and Forward.

Time Information: Time information indicates the total drive time while the GPS Tracker is running. GPS Tracker runs for as long as the camera is recording.

Log Data File: Allows the user to play the selected log file. When multiple files are selected, all of the files are added to the Log Data File for viewing.

Driving Information: The selected file is played on the map and reports total distance, total driving time, total stop duration, average speed and maximum speed.

Map-View: The file being viewed is also showing driving path on the Google Map.

Firmware Update / The Recording System

Example I – The number of video clips (Event or Manual)

- 1) Maximum 50 Event recordings
It enables to overwrite from the oldest file when event files are full.
(50 files X 15MB & 1 Event folder)
- 2) Maximum 20 Manual recordings
It enables to overwrite from the oldest file when manual files are full.
(20 files X 15MB & 1 Manual folder)

Example II – The number of video clips (Continuous)

- 1) Maximum 48 folders
- 2) 60 files per each folder
Folder name: Dx_Year+Month+Day_Hour+Minute
Dx_20100303_1200
File name: drf[r]_Month+Day_Hour+Minute+Second.mp4
drf_20100303_120000.mp4, drr_20100303_120000.mp4

Example III – The number of Log files

- 1) Maximum 72 Log files (3days, 1 day per 24 files)
- 2) 60 log files per each folder
Folder name: Lx_Year+Month+Day_Hour+Minute
Lx_20100303_120000
File name: log_Year+Month+Day_Hour+Minute+Second.KTL
log_20100303_120000.KTL

How to update Firmware

1. Download the latest firmware into the memory card via Glocam.
2. Insert the Memory Card into the Camera "Card Slot", then connect the power for automatic update.

Caution

1. Do not disconnect the power cord or turn the engine off while firmware is updating.
2. Do not remove Micro SD™ Card while updating.

Troubleshooting

Problem	Measures	Remarks
Camera Power Error The phone is not turned on or the Voice or LED is not operating	1) Check that the power cord is securely inserted into the camera and also securely inserted into the 12-V receptacle (Cigarette Lighter) 2) Check that the harness power cable (if camera is hard wired to battery) is securely connected to the vehicle's fuse box. 3) Upgrade the firmware after formatting the Memory Card.	If this problem persists after checking, please contact Glonex for service.
Card Error	1) Check that the card is properly inserted into the slot on the camera. 2) Check that the card is an authentic, recommended SD™ Card. 3) Upgrade the firmware after formatting the Memory Card.	If this problem persists after checking, please contact Glonex for service.
GPS is not operating correctly. Saved time and date are not correct. When the video is playing, the speed doesn't display.	1) Check if there are any objects obstructing the cameras ability to receive satellite signals, such as metal coating on the windshield. 2) Ensure that the location and angle of the unit are correct. 3) Upgrade the firmware after formatting the Memory Card. Note: GPS may not work properly in closed environments such as: Tunnels, Parking Garages, around Tall Buildings, etc. Or if it has not been used in more than 3 days, if this is the case it may take longer to resume normal operation.	Ensure that you are not in areas that could block the signal. If so, disconnect the power, then reconnect. If this problem persists after checking, please contact Glonex for service.
Play Error When the GC1 or GC2 Manager is running and the performance screen is not displayed. PC Manager is opened but the file doesn't play		If this problem persists after checking, please contact Glonex for service.
Speaker Error When playing the Voice Message and it can't be heard. There is static in the Voice Message.	1) Check that the interior video is turned on. The Voice Message will not work when the interior recording is turned off. 2) Ensure that the power cord is securely inserted into the camera and also into the 12-V receptacle (Cigarette Lighter).	If this problem persists after checking, please contact Glonex for service.

Appendix

Product Specifications

Power Consumption	Weight	Dimension	Temperature
1.5W	45g	GC1: 86.2(W)X56.7(H)X52.4(D) GC2: 100(W)X56.7(H)X52.4(D)	-20 ~ +50°
Camera	GPS	G-sensor	Storage
1Camera / 0.3M pixel CMOS digital sensor	Internal GPS Module	Internal 3D "G" sensor	Memory Card
Voice REC.	Event	Resolution	Power Supply
Internal MIC	Emergency button (Collision, Q-accel, & Q-break detection)	640 x 480	DC 12V~24V (Cigar jack)

Memory Calculation

Memory	2G	4G	8G
	2,048M	4,096M	8,192M
Capacity	1,948M	3,996M	8,092M
TTL Rec. time	2hour	4hour	7hour
GPS Log back data	72hour	72hour	72hour

- Micro SD™ Card (2GB~16GB) available
- 4GB/8GB (CLASS 4 or higher) recommended

Warranty Card

About our service:

- Glonex, Inc. warrants our products as follows according to Consumers Conflict Settlement Standards (Fair Trade Commission Bulletin No. 2008-3).
- When a service is requested, Glonex, Inc. or other appointed servicing company will carry out the service.
- Warranty related inquiries will be responded to within 7 days and repairs will be provided within 14 days after the date of such request.

Product Name: _____ Purchase Date: _____

Model #: _____ Serial #: _____ Price #: _____

Purchased From: _____

Warranty is Valid for ONE (1) year and product parts are available for TWO (2) years.

Free Repairs

Free repair services are only limited to the faulty products purchased within ONE (1) year (warranty period).

Types of Problems		Warranty Provided	
		Within Warranty Period	After Warranty Period
Defect found within ten (10) days from date of purchase.		Replacement or Refund	Not Applicable
Defect found with performance of functions during normal operation within one (1) month from date of purchase.		Replacement	Not Applicable
Repairable	Up to 3 defects due to the same cause.	Free Repair	Charged Repair
	More than 4 defects due to the same cause.	Replacement or Refund	Charged Repair
Non - Repairable	Parts for replacement are available but not repairable (within parts available period)	Replacement or Refund	Replacement after deducting fixed price.
	Non-repairable due to unavailability of parts for replacement (within parts available period)	Replacement or Refund	Refund by adding 10% to the amount after deducting fixed amount.

Charged Repairs

1) Cases not considered as defect:

If you request a repair service for non-defects, you will be charged for the repair fee, so please read the instructions carefully. (Non-repairable cases, based on separate standards).

- Instruction on how to operate the product or simple adjustment without disassembling. - Services related to external antenna or wired signal. - Reinstalling the product that was improperly installed by the sales representative. - Cleaning inside of the product or removing dirt.	1st instance is free, afterward any repairs of this nature will have a service charge.
When defect has occurred due to foreign substance.	Service charge applies for all instances

2) Defects caused by consumer:

- When defect is caused by negligence, repairs or modification of the customer.
- When defect is caused by repairs done by a person other than engineers from Glonex, Inc. or its appointed service center.
- When defect is caused by wrong electrical capacity. (e.g.: When using 100V product with 120V power)
- Defects or damages caused by dropping of the product after installation.
- When defect is caused by using optional parts not authorized by Glonex, Inc.

3) Others:

- When defect is caused by natural disasters (Lightning Strike, Fire, Flood, etc.)
- When the product is used with unstable power - power surges.
- When consumable parts are expired (batteries, etc.)

WARRANTY, REGISTRATION & TECHNICAL SUPPORT

PLEASE FILL OUT AND RETURN THE PRODUCT REGISTRATION CARD INCLUDED WITH YOUR NEW GLONEX PRODUCT OR FILL OUT THE PRODUCT REGISTRATION FORM ON THE GLONEX WEB PAGE AT: <http://www.glonex.net>.

BE SURE TO KEEP A COPY OF YOUR SALES RECEIPT!

STANDARD WARRANTY

Glonex, Inc. at 1156 Satellite Boulevard, Suite 300, Suwanee, GA 30024 USA WARRANTS that your NEW Product is free of defects of workmanship and materials. If there is a defect or malfunction of this product, Glonex, Inc. will repair it free of charge as follows:

PARTS: New or comparable rebuilt parts in exchange for defective parts for ONE (1) YEAR from date of customer purchase.

LABOR: Glonex, Inc. provides labor warranty for ONE (1) YEAR from date of end-user purchase. Product must be sent postage prepaid and insured to Glonex, Inc. in accordance with the warranty procedures outlined below. At completion of the repair, the consumer will be responsible for return shipping charges from Glonex, Inc. and for any parts or services no longer covered under warranty.

This warranty does not apply to persons who purchased this product second-hand or used.

This warranty does not include adjustments, parts and/or repairs required by circumstances beyond the control of Glonex, Inc., including but not limited to fire or other casualty, accident, neglect, abuse, misuse, lightning strike, or abnormal use that causes damages to the product.

THERE ARE NO OTHER EXPRESSED WARRANTIES EXCEPT AS STATED HEREIN. AFTER THE PERIOD OF EXPRESSED WARRANTY SET FORTH HEREIN, THERE ARE NO EXPRESSED OR IMPLIED WARRANTIES AND THOSE EXCLUDED INCLUDE THOSE OF MECHANICALITY AND FITNESS FOR PARTICULAR PURPOSE. Glonex, Inc. shall NOT be held liable for CONSEQUENTIAL DAMAGES resulting from any failure, defect or malfunction of this product. Some States do not allow limitation on how long an implied warranty lasts and some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

WARRANTY PROCEDURES

TO OBTAIN SERVICE UNDER THE TERMS OF THIS WARRANTY:

Please do the following:

- Send a copy of your original sales receipt showing original purchase date along with your mailing address and a note describing the nature of the problem to:

Glonex, Inc.
1156 Satellite Boulevard
Suite 300
Suwanee, GA 30024

- You will receive a return authorization number within 7-12 business days from the date your return request is received if it is determined that there is a basis for a replacement product. The return authorization form you receive will list the return procedures, applicable charges, if any, and the correct shipping address for the returned product.

PRODUCT SUPPORT HOTLINE:

For questions on use of this product or this warranty call 678-240-2317, Monday through Friday during normal business hours. You can also email Glonex, Inc. at: info@glonex.net.

Register Your Product online at:
www.glonex.net

Date of Purchase: _____ Model: _____

Place of Purchase: _____

PLEASE KEEP THIS INFORMATION FOR YOUR RECORDS